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## CURRENT LITERATURE.

### BOOK REVIEWS.

#### A university text.<sup>1</sup>

THAT there is need of a good general text-book of botany of university rank, written from the modern standpoint and largely from American material, has long been recognized. Professor Campbell is the first in this field, and his purpose is "to present in as compact a form as possible an outline of the essentials of modern botany." His book treats of anatomy, morphology, general taxonomy, physiology, and ecology, although the chapters are not grouped under such general divisions.

It is a serious question whether the science of botany has not advanced too far for any one man to undertake a general text of university rank. In the nature of things, the writer's own field will be developed much more extensively than the others, which perhaps are equally important as representing the present status of botany. The result will be a university text in one phase of the subject, and a very incomplete and elementary text in the other phases.

It is upon this basis that the book before us must be judged. The matter dealing with general anatomy, morphology, and the outlines of classification, occupies 460 pages. In this field Professor Campbell's standing is assured, and his grasp of the subject and his conclusions are derived from an immense amount of personal investigation. This strong personal element is attractive and useful, even though there may be much diversity of opinion as to many of the statements and conclusions. It is a matter of regret, however, that in a university text so little attention is given to the discussion of such important topics as the origin and evolution of sex, the appearance of the sporophyte, etc. The materials are presented in somewhat encyclopedic fashion, and as the author only intended the book as one of reference, perhaps he has left it to the university teacher to develop his own theories and lines of continuity.

The presentation of physiology occupies only 33 pages, which cannot be claimed to be an adequate expression of the important place of physiology in modern botany, especially from the university standpoint. The great brevity precludes completeness and often clearness, and sometimes

<sup>1</sup> CAMPBELL, DOUGLAS HOUGHTON, *A university text-book of botany*. 8vo. xv + 579, with 493 figures and 15 plates. New York: The Macmillan Company. 1902. \$4.00.

will probably result in misconception. For example, on p. 464, the independence of water and solutes in entering the cell is ignored, although it is fundamental; and on p. 489 there is hopeless confusion between rheotropism and hydrotropism, fundamentally different phenomena.

In the two chapters devoted to ecology, the style is easy and pleasing, but the presentation is altogether too brief and the matter too simple to satisfy elementary instruction in a university. Many would also object to the extreme teleological standpoint. The whole subject of ecology has been making such rapid development that it has become dangerous for one unfamiliar with the great mass of recent work and literature to venture many statements.

Perhaps the most noticeable feature from the standpoint of an organized text is the lack of any typographical organization of captions. Of course it is troublesome to coordinate captions so as to express the proper relationships of subjects, but it is extremely desirable in a text for elementary instruction, even in universities.

After all, the book will stand for a mass of morphological facts, most of which have passed under the author's observation, illustrated to quite an unusual extent by the author's own drawings, and largely derived in a most desirable way from American material. From this standpoint it is very welcome, and will doubtless be largely used, as its author intended, for a book of reference.—J. M. C.

#### Saccardo's *Sylloge Fungorum*.

ANOTHER volume of this monumental work, projected and edited by Professor P. A. Saccardo, has come to hand. It is the sixteenth volume,<sup>2</sup> and is of the same notable size and quality as those preceding. The fifteenth volume, devoted to synonymy, and prepared in collaboration with Professor E. Mussat of Paris, has not yet been distributed, although it was expected to appear in 1901. In the present volume are mentioned 4853 species, representing mycological activity during the preceding eighteen months, *i. e.*, from June 1899 to December 1901. Complete diagnoses are given of all the species except 490, which came in so late that only a citation could be entered at the back of the volume. There is an excellent species and host index, and a universal index of genera. The total number of species of the fifteen volumes now aggregates 52,157. In this volume twenty-seven species are described for the first time, and new names are proposed for five species previously published.—J. C. ARTHUR.

<sup>2</sup> SACCARDO, P. A., *Sylloge fungorum omnium hucusque cognitorum; supplementum universale, pars V. Auctoribus P. A. Saccardo et P. Sydow. Adectus est index totius operis.* 8vo, pp. 1291. Patavii, 1902. 81 francs.